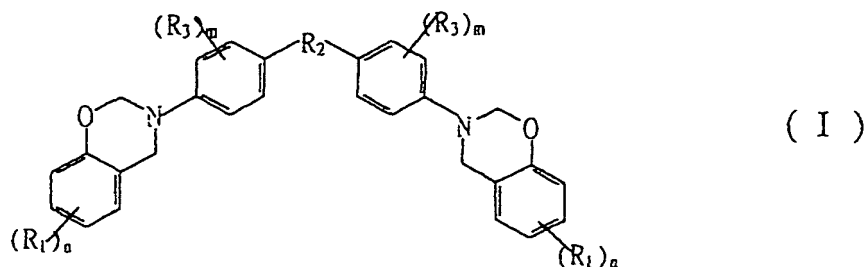


WHAT IS CLAIMED IS:

1. An azaoxa heterocyclic compound represented by the following formula (I):



wherein, R_1 is one selected from the group consisting of an alkyl group, an alkenyl group, an alkoxyl group, a hydroxy group, halogen and an amino group; R_2 is one selected from the group consisting of a bond, an alkylene group, O, S and SO_2 ; R_3 is H or C_1 - C_6 alkyl group; m is an integer of 0 to 4; and n is an integer of 1 to 4.

2. The azaoxa heterocyclic compound according to claim 1, wherein R_1 is an alkyl group.

3. The azaoxa heterocyclic compound according to claim 1, wherein the alkyl group is t-butyl.

4. The azaoxa heterocyclic compound according to claim 1, wherein R_2 is an alkylene group.

5. The azaoxa heterocyclic compound according to claim 1, wherein the alkylene group is a methylene group.

6. The azaoxa heterocyclic compound according to claim 1, wherein R_3 is hydrogen.

7. The azaoxa heterocyclic compound according to claim 1, wherein m is 1.

8. The azaoxa heterocyclic compound according to claim 1, wherein n is 1.

9. The azaoxa heterocyclic compound according to claim 1, wherein the azaoxa heterocyclic compound is prepared by the reaction of a phenolic compound, an aromatic diamine compound and an aldehyde compound..

10. The azaoxa heterocyclic compound according to claim 9, wherein the phenolic compound is represented by the following formula (II):

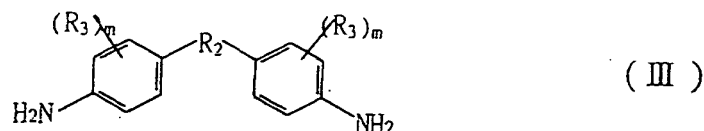


wherein R_1 and n are as defined above.

11. The azaoxa heterocyclic compound according to claim 10, wherein the phenolic compound is an alkylphenol compound.

12. The azaoxa heterocyclic compound according to claim 11, wherein the alkylphenol compound is p-t-butylphenol.

13. The azaoxa heterocyclic compound according to claim 9, wherein the aromatic diamine compound is represented by the following formula (III):



wherein R_2 , R_3 and m are as defined above.

14. The azaoxa heterocyclic compound according to claim 14, wherein the aromatic diamine compound is dianilinomethane.

15. The azaoxa heterocyclic compound according to claim 1, wherein the azaoxa heterocyclic compound is used as a hardener.

16. The azaoxa heterocyclic compound according to claim 1, wherein an epoxy resin composition is formed by the azaoxa heterocyclic compound and an epoxy resin.

17. The azaoxa heterocyclic compound according to claim 16, wherein the epoxy resin composition is useful in the application of the laminate, adhesive, semiconductor packaging material and material made of phenolic resin.

18. A method for preparing the azaoxa heterocyclic compound, comprising undergoing the polymerization reaction of phenolic compound, amine compound and aldehyde compound using a hydrocarbon solvent to form the compound having the benzoxazine cyclic structure, wherein at least one of hydrogen atoms on ortho-positions to the hydroxy group in the phenolic compound is unsubstituted and the amine compound is a primary amine compound.

19. The method according to claim 18, wherein the phenolic compound is represented by the following formula (II):



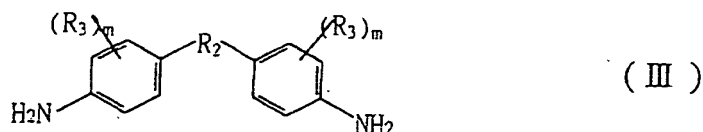
wherein R_1 and n are as defined above.

20. The method according to claim 19, wherein the phenolic compound is an alkylphenol.

21. The method according to claim 20, wherein the alkylphenol is p-t-butylphenol.

22. The method according to claim 20, wherein the amine compound is an aromatic diamine compound.

23. The method according to claim 22, wherein the aromatic diamine compound is represented by the following formula (III):



wherein R_2 , R_3 and m are as defined above.

24. The method according to claim 18, wherein the aldehyde is formaldehyde or paraformaldehyde.

25. The method according to claim 18, wherein the hydrocarbon solvent is one selected from aliphatic hydrocarbon solvents, alicyclic hydrocarbon solvents, aromatic hydrocarbon solvents and liquid state olefin compounds.

26. The method according to claim 25, wherein the hydrocarbon solvent is an aromatic hydrocarbon solvent.

27. The method according to claim 26, wherein the aromatic hydrocarbon solvent is toluene.

28. The method according to claim 26, wherein the aromatic hydrocarbon solvent is xylene.